

Docket No. 210022US55CONT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Alan K. SMITH et al

SERIAL NO: 09/893,470

GAU: 1644

FILED: June 29, 2001

EXAMINER: SAUNDERS, D.A.

FOR: HUMAN LINEAGE COMMITTED CELL COMPOSITION WITH ENHANCED PROLIFERATIVE POTENTIAL, BIOLOGICAL EFFECTOR FUNCTION, OR BOTH METHODS FOR OBTAINING THE SAME; AND THEIR USES



INFORMATION DISCLOSURE/RELATED CASE STATEMENT UNDER 37 CFR 1.97

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

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SIR:

Applicant(s) wish to disclose the following information.

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REFERENCES

- ☒ The applicant(s) wish to make of record the references listed on the attached form PTO-1449. Copies of the listed references are attached, where required, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language references.
- ☐ A check is attached in the amount required under 37 CFR §1.17(p).

RELATED CASES

- ☐ Attached is a list of applicant's pending application(s) or issued patent(s) which may be related to the present application. A copy of the patent(s), together with a copy of the claims and drawings of the pending application(s) is attached along with PTO 1449.
- ☐ A check is attached in the amount required under 37 CFR §1.17(p).

CERTIFICATION

- ☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

- ☒ Please charge any additional fees for the papers being filed herewith and for which no check is enclosed herewith, or credit any overpayment to deposit account number 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
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Form PTO 1449
(Modified)U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEATTY DOCKET NO.
210022US55CONTSERIAL NO.
09/893,470

LIST OF REFERENCES CITED BY APPLICANT

APPLICANT

Alan K. SMITH et al.

FILING DATE

June 29, 2001

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1644

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	6,326,198	12/04/01	Emerson et al			
	AB	6,299,650	10/09/01	Van Blitterswijk et al			
	AC	5,811,094	09/22/98	Caplan et al			
	AD	5,646,043	07/08/97	Emerson et al			
	AE	4,135,975	01/23/79	Lichtman et al			
	AF	4,514,499	04/30/85	Noll			
	AG	4,861,714	08/29/89	Dean et al			
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	AI	5,605,822	02/25/97	Emerson et al			
	AJ	5,670,351	09/23/97	Emerson et al			
	AK	4,481,946	11/13/84	Altshuler et al			
	AL	4,714,680	12/22/87	Civin			
	AM	4,889,812	12/26/89	Guinn et al			
	AN	5,032,508	07/16/91	Naughton et al			

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	AO	90/15877A2	12/27/90	WIPO w/Abstract		
	AP	95/06409	03/09/95	WIPO w/Abstract		
	AQ	0 358 506	03/14/90	Europe w/Abstract		
	AR	0 455 482	11/06/91	Europe w/Abstract		
	AS	93/18136	09/16/93	WIPO w/Abstract		
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OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

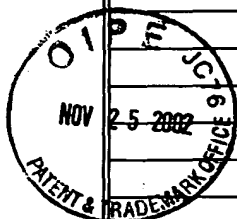
	AW	M. W. Glacken et al., "Mammalian cell culture: engineering principles and scale-up", Trends in Biotechnology, Vol. 1, No. 4, 1983, PP. 102-108
	AX	Steven A. ROSENBERG et al., "In Vitro Growth of Murine T Cells II. Growth of in Vitro Sensitized Cells Cytotoxic for Alloantigens", The Journal of Immunology, Vol. 121, No. 5. November 1978, PP. 1951-1955
	AY	W. French ANDERSON, "Prospects for Human Gene Therapy", Science, Vol. 26, October 26, 1987, pp. 401-409
	AZ	T.M. Dexter, "The Message in the medium", Nature, Vol. 309, June 1984, pp 746-747

Examiner

Date Considered

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	BA	5,945,225	08/31/99 Speith-Herfurth et al				
	BB	5,670,147	09/23/97 Emerson et al				
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	BK	5,851,832	12/22/98 Weiss et al				
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	BN	4,847,201	07/11/89 Kaswasaki et al				
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OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)							
	BW	Manfred R. Koller, et al. "Expansion of Primitive Human Hematopoietic Progenitors in a Perfusion Bioreactor System with LL-3, LL-6, and Stem Cell Factor", Biotechnology, Vol. 11, March, 1993, pp. 358-363					
	BX	Bernhard O. PALSSON et al, "Expansion of Human Bone Marrow Progenitor Cells in a High Cell Density Continuous Perfusion System", Biotechnology, Vol. 11, March, 1993, pp. 368-372					
	BY	Giovanni MIGLIACCIO et al., "In Vitro Differentiation of Human Granulocyte/Macrophage and Erythroid Progenitors: Comparative Analysis of the Influence of Recombinant Human Erythropoietin, G-CSF, GM-CSF, and IL-3 in Serum-Supplemented and Serum-Deprived Cultures", Blood, Vol. 72, No. 1 July 1988, pp. 248-255					
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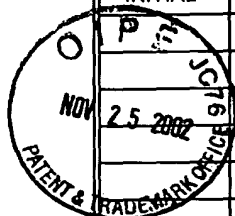
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	CW	Paul BAINES et al., Exp. Hematol. 16:785-789 (1988)					
	CX	Jan A. NOLTA et al., Human Gene Therapy, 1:257-268 (1990)					
	CY	John R. STEPHENSON et al., Proc. Nat. Acad. Sci. U.S.A., Vol. 68, No. 7, pp. 1542-1546, July 1971					
	CZ	Giovanni MIGLIACCIO et al., Exp. Hematol. 18:1049-1055 (1990)					
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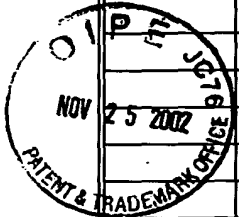


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	DW	Richard M. Schwartz et al., "In Vitro Myelopoiesis Stimulated by Rapid Medium Exchange and Supplementation With Hematopoietic Growth Factors", Blood, Vol 78, No. 12, December 15, 1991, pp. 3155-3161					
	DX	Rob E. Ploemacher et al., "Use of Limiting-Dilution Type Long-Term Marrow Cultures in Frequency Analysis of Marrow-Repopulating and Spleen Colony-Forming Hematopoietic Stem Cells in the Mouse", Blood, Vol 78, No. 10 (November 15, 1991, pp. 2527-2533					
	DY	Manfred R. Koller et al., "Effects of Synergistic Cytokine Combinations, Low Oxygen, and Irradiated Stroma on the Expansion of Human Cord Blood Progenitors", Blood, Vol 80, No. 2 (July 15, 1992), pp. 403-411					
	DZ	J. AIKEN et al., Journal of Pediatric Surgery, Vol. 25, No. 1 (January), 1990; pp. 140-145					
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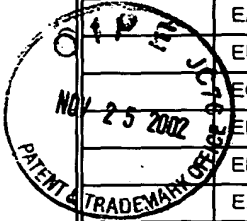


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	EW	C. FAVRE et al., "Interleukin-4 has Basophilic and Eosinophilic Cell Growth-Promoting Activity on Cord Blood Cells", Blood, Vol. 1, January 1, 1990, pp. 67-73					
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	EY	Yoichi TAKAUE et al., "Effect of Recombinant Human G-CSF, GM-CSF, IL-3, and IL-1 α on the Growth of Purified Human Peripheral Blood Progenitors", Blood, Vol. 76, No. 2, July 15, 1990, pp. 330-335					
	EZ	H. J. Sutherland et al., "Alternative Mechanisms With and Without Steel Factor Support Primitive Human Hematopoiesis", Blood, Vol. 81, No. 6., March 15, 1993, pp. 1465-1470					
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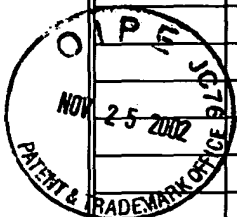
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OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)							
	FW	Lucia H. Coutinho et al., "Effects of Recombinant Human Granulocyte Colony-Stimulating Factor (CSF), Human Granulocyte Macrophage-CSF, and Gibbon Interleukin-3 on Hematopoiesis in Human Long-Term Bone Marrow Culture", Blood, Vol. 11, June 1, 1990, pp. 2118-2129					
	FX	Susan C. GUBA et al., "Bone Marrow Stromal Fibroblasts Secrete Interleukin-6 and Granulocyte-Macrophage Colony-Stimulating Factor in the Absence of Inflammatory Stimulation: Demonstration by Serum-Free Bioassay, Enzyme-Linked Immunosorbent Assay, and Reverse Transcriptase Polymerase Chain Reaction", Blood, Vol. 80, No. 5, September 1, 1992, pp. 1190-1198					
	FY	Richard M. SCHWARTZ et al., "Rapid medium perfusion rate significantly increases the productivity and longevity of human bone marrow cultures", Proc. Natl. Acad. Sci. USA, Vol. 88, pp. 6760-6764, August 1991					
	FZ	David E. HARRISON et al., "Primitive hemopoietic stem cells: direct assay of most productive populations by competitive repopulation with simple binomial, correlation and covariance calculations", Experimental Hematology 21:206-219 (1993)					
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OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	GW	D. KRUMWIEH et al., "Preclinical Studies on Synergistic Effects of IL-1, IL-3, G-CSF and GM-CSF in Cynomolgus Monkeys", International Journal of Cell Cloning 8:229-248, Suppl. 1 (1990)
	GX	Makio OGAWA, Ph.D., "Effects of Hemopoietic Growth Factors on Stem Cells in Vitro", Hematology/Oncology Clinics of North America, Vol. 3(3) September 1989, pp. 453-464
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	HW	Shiang HUANG et al., "Formation of haematopoietic Microenvironment and haematopoietic stem cells from single human bone marrow stem cells", Nature, Vol. 360, 24/31 December 1992, pp. 745-749					
	HX	Randy A. HOCK et al., "Retrovirus-mediated transfer and expression of drug resistance genes in human haematopoietic progenitor cells", Nature, Vol. 320, March 1986, pp. 275-277					
	HY	A.A. FAUSER et al., "Granuloerythropoietic Colonies in Human Bone Marrow, Peripheral Blood, and Cord Blood" Blood, Vol. 52, No. 6, December 1978, pp. 1243-1248					
	HZ	C.D. MYERS et al., "A Cell Line Secreting Stimulating Factors for CFU-GEMM Culture", Blood, Vol. 64, No. 1 (July) 1984, pp. 152-155					
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IW	Alice M. WANG et al., "Molecular Cloning of the Complementary DNA for Human Tumor Necrosis Factor", Science, Vol. 228, 20 November 1984, pp. 149-154
IX	Colin A. SIEFF et al., "Human Recombinant Granulocyte-Macrophage Colony-Stimulating Factor: A Multilineage Hematopoietin" Science, Vol. 230, 6 December 1985, pp. 1171-1173
IY	Robert E. DONAHUTE et al., "Human IL-3 and GM-CSF Act Synergistically in Stimulating Hematopoiesis in Primates", Science, Vol. 241, 30 September 1988, pp. 1820-1823
IZ	Ronald H. SCHWARTZ, "A Cell Culture Model for T Lymphocyte Clonal Anergy", Science, Vol. 248, 15 June 1990, pp. 1349-1356

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	JW	Toshio SUDA et al., "A Stimulatory Effect of Recombinant Murine Interleukin-7 (IL-7) on B-Cell Colony Formation and an Inhibitory Effect of IL-1 α ", Blood, Vol. 74, No. 6, November 1, 1989, pp. 1936-1941
	JX	Heather J. SUTHERLAND et al., "Characterization and Partial Purification of Human Marrow Cells Capable of Initiating Long-Term Hematopoiesis In Vitro", Blood, Vol. 74, No. 5 (October), 1989; pp. 1563-1570
	JY	Sem SEELAND et al., "Combined and Sequential Effects of Human IL-3 and GM-CSF on the Proliferation of CD34+ Hematopoietic Cells From Cord Blood", Blood, Vol. 73, No. 5, (April), 1989; pp. 1195-1201
	JZ	Sallie S. BOGGS, "Targeted Gene Modification for Gene Therapy of Stem Cells", International Journal of Cell Cloning 8:80-96 (1990)

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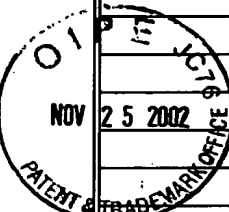
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LIST OF REFERENCES CITED BY APPLICANT				APPLICANT Alan K. SMITH et al			
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	KW	Cynthia E. DUNBAR et al., "Gene Transfer into Hematopoietic Progenitor and Stem Cells: Progress and Problems", Stem Cells 1994;12:563-576					
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	KZ	pp. 573-578: "Clinical Transplantation", In <u>Immunology</u> , Second Edition, J. Kuby, W.H. Freeman and Company, New York (1994)					
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LIST OF REFERENCES CITED BY APPLICANT

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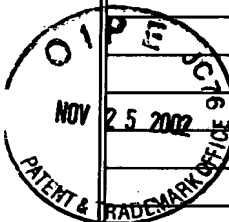
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	MY	Li Lu et al., "Effect of recombinant and purified human haematopoietic growth factors on in vitro colony formation by enriched populations of human megakaryocyte progenitor cells", British Journal of Haematology, 1988, Vol. 70, pp. 149-156					
	MZ	A. Montes BORINAGA et al., "Interleukin-6 is a cofactor for the growth of myeloid cells from human bone marrow aspirates but does not affect the clonogenicity of myeloma cells in vitro", British Journal of Haematology, 1990, No. 76, pp. 476-483					
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	NW	P.M. LEHN., "Gene therapy using bone marrow transplantation: a 1990 update", Bone Marrow Transplantation (1990), No. 5. pp. 287-293					
	NX	Manfred R. KOLLER et al., "Beneficial Effects of Reduced Oxygen Tension and Perfusion in Long-Term Hematopoietic Cultures", Biochemical Engineering, VII, Vol. 665 of the Annals New York Academy of Sciences, pp. 105-116, (October 1992)					
	NY	D. KRUMWIEH et al., "Human Recombinant Derived IL-3 and GM-CSF in Hematopoiesis of Normal Cynomolgus Monkeys", Behring Inst., Mitt., No. 83, pp. 250-257 (1988)					
	NZ	John BRANDT et al., "Detection of Human Hematopoietic Progenitor Cell Capable of Forming Blast Cell Containing Colonies <u>In Vitro</u> ", Advances in Experimental Medicine and Biology, Vol. 241, pp. 165-173					
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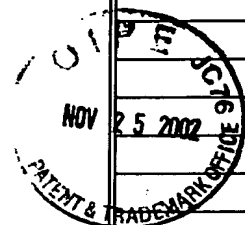
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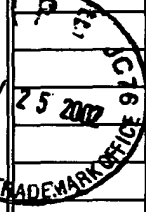
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	OW	C.J. EAVES et al., "The Human Hematopoietic Stem Cell In Vitro and In Vivo", Blood Cells (1992) 18:301-307					
	OX	Masaaki ISHIZUKA et al., "Mitogenic Effect of Bestatin on Lymphocytes", The Journal of Antibiotics, Vol. 33, No. 6, (June 1980), pp. 653-662					
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	PZ	Yves-Jacques SCHNEIDER et al., "Monoclonal Antibody Production in Semi-Continuous Serum-and protein-free culture", Journal of Immunological Methods, Vol. 129 (1990) pp.251-268						
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	QW	Philip W. KANTOFF et al., "Expression of Human Adenosine Deaminase in Nonhuman Primates after Retrovirus-Mediated Gene Transfer", J. Exp. Med. Volume 166, July 1987, pp. 219-234.					
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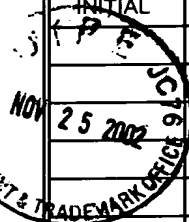
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	RW	E. Morioka et al, "Purification of a granulocyte colony-stimulating factor from the conditioned medium of a subclone of human bladder carcinoma cell line 5637, HTB9", Res. Exp. Med. (1990), 190:229-238					
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